

Abstract

Rotary slide valve for power-assisted  
steering systems of motor vehicles

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A rotary slide valve (1) for power-assisted steering systems of motor vehicles contains a rotary slide (2) which is connected fixedly in terms of rotation to a valve input member (4). The control bush (3) is connected fixedly in terms of rotation to a valve output member (5).

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The two valve elements are arranged so as to be movable coaxially one in the other and are rotatable relative to one another at most by the amount of the rotary travel of a backlash coupling. The rotary slide (2) has outer and the control bush inner longitudinal control grooves (6, 7) which cooperate with one another in order to control a pressure medium to and from two working spaces of a servomotor.

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The rotary slide (2) is connected to the valve output member (5) via a torsion-bar spring (9). Production-related tolerances which may lead to undesirable effects in driving behavior are compensated by means of a connecting element (10).

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Figure 1

PCT

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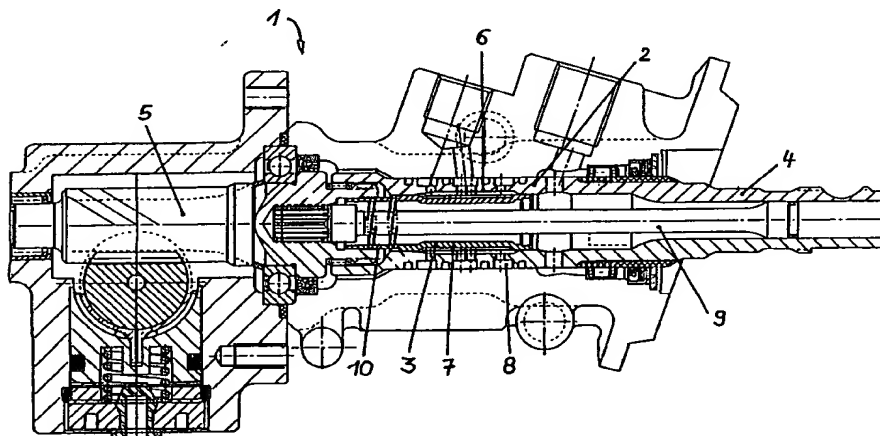
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(54) Title: ROTARY SHIFT VALVE FOR SERVO-ASSISTED STEERING SYSTEMS OF MOTOR VEHICLES

(54) Bezeichnung: DREHSCHIEBERVENTIL FÜR HILFSKRAFTLENKUNGEN VON KRAFTFAHRZEUGEN

## (57) Abstract

The invention relates to a rotary shift valve (1) for servo-assisted steering systems of motor vehicles. Said valve (1) comprises a rotary disc (2) which is connected to a valve input member (4) in a rotationally-fixed manner. The control bush (3) is connected to the valve output member (5) in a rotationally-fixed manner. The two valve elements are arranged coaxially such that they can move within one another and can be rotated in relation to one another about the rotational travel of a backlash coupling. The rotary disc (2) is provided with external longitudinal control grooves (6, 7) and the control bush (3) is provided with internal longitudinal control grooves (6, 7). Said grooves engage with each other for controlling a hydraulic fluid towards and away from two working chambers of a servomotor. The rotary disc (2) is connected to the valve output member via a torsion-bar spring (9). Manufacturing-related tolerances which can create undesired effects of the performance are compensated by a connection element (10).



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